WHAT IS CLAIMED IS:

1. A method of operating a vapor compression system, the vapor compression system defining a closed fluid circuit in which a refrigerant is circulated and having operably disposed therein, in serial order, a compressor, a high pressure heat exchanger, an expansion device and a low pressure heat exchanger, said method comprising:

applying a variable thermal load on a first one of the heat exchangers;

monitoring the thermal load placed on the first heat exchanger; and

controlling the operation of the system to limit the thermal load placed on the first heat exchanger when the thermal load exceeds a predetermined value.

2. The method of claim 1 wherein monitoring the thermal load of the first heat exchanger comprises obtaining a first value indicative of the temperature of the refrigerant at a first location in the fluid circuit and obtaining a second value indicative of the temperature of the refrigerant at a second location in the fluid circuit.

3. The method of claim 2 wherein the first location is proximate an inlet to the low pressure heat exchanger and the second location is proximate an outlet of the low pressure heat exchanger.

4. The method of claim 2 wherein the first location is proximate an inlet to the high pressure heat exchanger and the second location is proximate an outlet of the high pressure heat exchanger.

5. The method of claim 2 wherein the first location is proximate an inlet to the compressor and the second location is proximate an outlet of the compressor.

6. The method of claim 1 wherein monitoring the thermal load of the first heat exchanger comprises obtaining a first value indicative of the temperature of a heat exchange medium in thermal communication with the first heat exchanger and obtaining a second value indicative of an operating parameter of the vapor compression system.

7. The method of claim 6 wherein said first heat exchanger is the low pressure heat exchanger and said second temperature is the discharge temperature of air cooled by the first heat exchanger.

8. The method of claim 1 wherein an electrical motor drives the compressor and monitoring the thermal load of the first heat exchanger comprises monitoring the electrical current powering the electrical motor.

9. The method of claim 1 wherein controlling the operation of the system comprises controlling the interaction of a heat exchange medium with the first heat exchanger.

10. The method of claim 9 wherein the heat exchange medium is air conveyed by a passageway in communication with the first heat exchanger and controlling the interaction of the air with the first heat exchanger comprises controlling the cross sectional area of the passageway.

11. The method of claim 9 wherein the heat exchange medium is air conveyed by a passageway in communication with the first heat exchanger and controlling the interaction of the air with the first heat exchanger comprises selectively recirculating air in the passageway.

12. The method of claim 9 wherein the heat exchange medium is air and controlling the interaction of the air with the first heat exchanger comprises controlling the operation of an air moving device in communication with the first heat exchanger.

13. The method of claim 12 wherein controlling the operation of the air moving device comprises controlling the operating speed of the air moving device.

14. The method of claim 12 wherein controlling the operation of the air moving device comprises controlling the direction at which air is moved by the air moving device.

15. A method of operating a vapor compression system, the vapor compression system defining a closed fluid circuit in which a refrigerant is circulated and having operably disposed therein, in serial order, a compressor, a high pressure heat exchanger, an expansion device and a low pressure heat exchanger, said method comprising:

coupling the vapor compression system with an application wherein a heat exchange medium is communicated between the application and the system;

exchanging thermal energy between the heat exchange medium and a first one of the heat exchangers, wherein a variable thermal load is placed on the first heat exchanger by the heat exchange medium during operation of the system;

controlling the operation of the system to limit the thermal load placed on the first heat exchanger when the thermal load exceeds a predetermined value.

16. The method of claim 15 wherein the application is a refrigerated cabinet, the first heat exchanger is the low pressure heat exchanger and the heat exchange medium is air that is cooled by the first heat exchanger.

17. The method of claim 16 wherein controlling the operation of the system comprises controlling the passage of air over the first heat exchanger.

18. The method of claim 17 wherein controlling the passage of air over the first heat exchanger comprises controlling the area of a passageway through which flows the air passing over the first heat exchanger.

19. The method of claim 17 wherein controlling the passage of air over the first heat exchanger comprises selectively recirculating air within a passage in communication with the first heat exchanger.

20. The method of claim 17 wherein controlling the passage of air over the first heat exchanger comprises controlling the operation of an air moving device forcing the passage of air over the first heat exchanger.

21. The method of claim 20 wherein controlling the operation of the air moving device comprises controlling the operating speed of the air moving device.

22. The method of claim 20 wherein controlling the operation of the air moving device comprises controlling the direction at which air is directed by the air moving device.

23. The method of claim 15 wherein an electrical motor drives the compressor and monitoring the thermal load of the first heat exchanger comprises monitoring the electrical current powering the electrical motor.

24. The method of claim 15 wherein monitoring the thermal load of the first heat exchanger comprises obtaining a first value indicative of the temperature of the ambient environment and obtaining a second value indicative of an operating parameter of the vapor compression system.

25. The method of claim 15 wherein monitoring the thermal load of the first heat exchanger comprises obtaining a first value indicative of the temperature of the refrigerant at a first location in the fluid circuit and obtaining a second value indicative of the temperature of the refrigerant at a second location in the fluid circuit.

26. A vapor compression system for use with a refrigerant, said system comprising:

a closed fluid circuit in which the refrigerant is circulated, the fluid circuit having operably disposed therein, in serial order, a compressor, a high pressure heat exchanger, an expansion device, and a low pressure heat exchanger;

at least one sensing device operably coupled with said system measuring a value indicative of a variable thermal load placed on a first one of said heat exchangers; and

a heat exchange subsystem limiting the thermal load placed on the first heat exchanger when the variable thermal load exceeds a predetermined value.

27. The vapor compression system of claim 26 wherein said at least one sensing device comprises a first temperature sensor positioned at a first location in said fluid circuit and a second temperature sensor positioned at a second location in said fluid circuit.

28. The vapor compression system of claim 26 wherein said at least one sensing device comprises a first temperature sensor positioned to measure an ambient temperature and a second temperature sensor positioned to measure a temperature indicative of an operating parameter of the vapor compression system.

29. The vapor compression system of claim 26 further comprising an electrical motor coupled to said compressor and driving said compressor and wherein said at least one sensing device senses the electrical current powering said electrical motor.

30. The vapor compression system of claim 26 wherein said system is a modular assembly removably couplable to an application.

31. The vapor compression system of claim 26 further comprising a cabinet and an air passage providing communication between the first heat exchanger and an interior volume of the cabinet, the first heat exchanger being the low pressure heat exchanger.

32. The vapor compression system of claim 31 wherein said heat exchange subsystem controls the flow of air through said air passage.

33. The vapor compression system of claim 32 wherein heat exchange subsystem comprises an adjustable restriction member, adjustment of said restriction member varying the cross sectional area of said air passage.

34. The vapor compression system of claim 32 wherein said heat exchange subsystem further comprises a second passage in communication with said air passage at first and second locations wherein air is recirculatable through said air passage through said second passage.

35. The vapor compression system of claim 34 wherein said first location is downstream of said first heat exchanger and said second location is upstream of said first heat exchanger and air is recirculatable through said first heat exchanger.

36. The vapor compression system of claim 31 wherein said heat exchange subsystem comprises an air moving device forcing the passage of air over said first heat exchanger and wherein the variable operation of said air moving device controls the flow of air through said air passage.

37. The vapor compression system of claim 36 wherein said air moving device has a variable operating speed and varying said operating speed varies the flow rate of air through said air passage.

38. The vapor compression system of claim 36 further comprising a mechanism selectively adjusting an air flow direction defined by said air moving device.